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06/29/2004

Jan Webjorn

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OSTROLENK FABER GERB & SOFFEN
1180 AVENUE OF THE AMERICAS
NEW YORK, NY 100368403

EXAMINER

AMIRI, NAHID

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/500,583
Filing Date: June 29, 2004
Appellant(s): WEBJORN, JAN

Robert C. Faber
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 3/3/2010 and 3/18/2010 appealing from the Office action mailed 6/9/2009.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

1, 2, 5-8, and 10-18.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

4,183,562	Watkins et al.	01-1980
2,940,779	Buono	6-1960

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

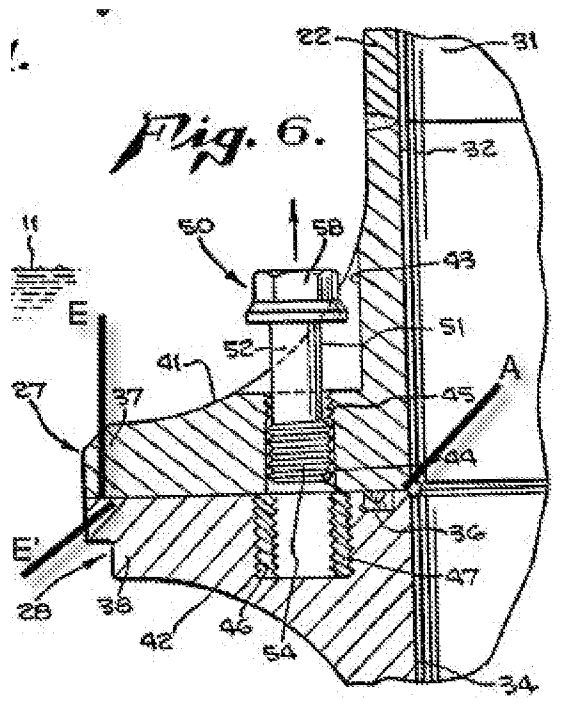
Claims 1, 11, 12, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 4,183,562 Watkins et al.

At the outset, it should be noted that claim 1 is drawn solely to a single flanged member and it is this one flanged member for which patentability is to be determined. How this flanged member is intended to interact with some other flanged member in a flanged joint is of little consequence to the patentability of the single flanged member, itself. Should Appellant believe that the functional recitations of intended use impart patentably distinguishing structure to the single flanged member, then he is reminded that he has the burden of proof to show that such is not inherently present in similar prior art flanged members (i.e., similar as claimed).

With respect to claim 1, it should be noted that the claim is drawn only to one flanged member. Accordingly, as claimed, Watkins et al. disclose a flanged member (Fig. 6) configured to be included as a first flanged member (37) in a flanged joint in a pressure equipment device, the flanged joint comprising the first flanged member (37) and a corresponding second flanged member (38) with a second flanged end having a second end surface (E', see markup, below), said first flanged member (37) comprising a first flanged end with a first end surface (E, see markup, below) which is capable of corresponding to the second end surface (E') of the second flanged end of the second flanged member (38), at least a portion of the first load transferring surface in an unstressed condition being concave (constituted by a curved portion of an innermost portion of the first flange 37) in radial direction, such that the at least the portion of the first load transferring surface is curved and defined by a concave curve function, the first end surface (E) comprising a first load transferring surface through which forces are transferred when assembled together with the corresponding second flanged member; in a radial direction; wherein load transferring surface has an outermost abutment point (A, see markup, below) in a cross section of the first flanged member (37), the outermost abutment point (A) configured to abut against the second end surface of the second flanged member (38) when assembled together with said corresponding second flange member (38), the outermost (A) abutment point being the abutment point situated farthest in the radial direction from the central axis of the first flanged

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member (37), said load transferring surface has an innermost abutment point in a cross section of the first flanged member, the innermost abutment point configured to abut against the second end surface of the second flanged member when assembled together with said corresponding second flange member, the innermost abutment point being the abutment point situated nearest in the radial direction from the central axis of the first flanged member (37); and a boring (44) passing through the first end surface (E) at a radial distance from a central axis of the first flanged member (37) greater than the radial distance from the central axis of the first flanged member (37) to the innermost abutment point, and less than the radial distance from the central axis of the first flanged member to the outermost abutment point.



With respect to claim 11, Watkins et al. disclose a joint (Fig. 6) comprising a first flanged member (37) and a second flanged member (38) adapted for a pressure equipment device, said two first and second flanged members (37, 38) each comprising at least one flanged end having an end surface (E, E') comprising a load transferring surface through which forces are

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transferred when connecting together said two first and second flanged members (37, 38) in an assembled state, such that in the assembled state said each load transferring surface faces the other load transferring surface, wherein, for the first flanged member (37), at least a portion of the end load transferring surface in an unstressed condition is concave in a radial direction, such that the at least the portion of the end load transferring surface is defined by a concave curve function, said load transferring surface is concave in the radial direction over at least an area that is subjected to deformation when the first flanged member is assembled together with said second flanged member, and a proximal point on the at least the portion of said load transferring surface and a distal point of the at least the portion of said load transferring surface meeting a plane inclined in the radial direction of said flanged member wherein said load transferring surface has an outermost abutment (A) point in a cross section of the first flanged member (37), the outermost abutment point configured to abut against the end surface of the second flanged member (E') when assembled together with said corresponding second flange member (38), the outermost abutment point being the abutment point situated farthest in the radial direction from the central axis of the first flanged member (37), said load transferring surface has an innermost abutment point (B) in a cross section of the first flanged member (37), the innermost abutment point (B) configured to abut against the end surface of the second flanged member (38) when assembled together with said corresponding second flange member (38), the innermost abutment point (B) being the abutment point situated nearest in the radial direction from the central axis of the first flanged member (37); and a boring (44) passing through the end surface of the first flanged member (37) at a radial distance from a central axis of the first flanged member (37) greater than the radial distance from the central axis of the first flanged member (37) to the innermost abutment point (A), and less than the radial distance from the central axis of the first flanged member to the outermost abutment point.

With respect to claim 12, Watkins et al disclose (Fig. 6A) that the first and second flanged members (37, 38) each have a concave end load transferring surface (defined by an end innermost portion point of the first and second flanges 37, 38).

With respect to claim 16, Watkins et al disclose (Fig. 6A) that the load transferring surfaces of each of the first and second flanged members (37, 38) is configured to directly

contact the load transferring surface of the remaining flanged member.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

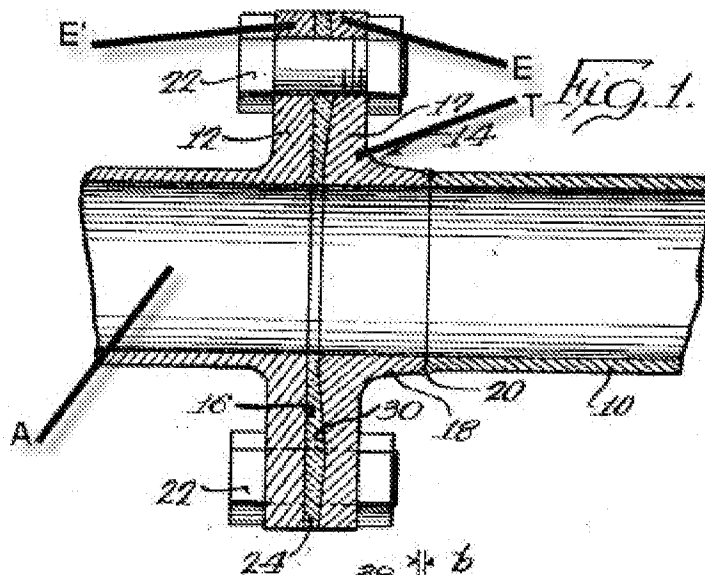
Claims 1, 2, 5-8, 10, 14, 15, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 2,940,779 Buono.

At the outset, it should be noted that claim 1 is drawn solely to a single flanged member and it is this one flanged member for which patentability is to be determined. How this flanged member is intended to interact with some other flanged member in a flanged joint is of little consequence to the patentability of the single flanged member, itself. Should Appellant believe that the functional recitations of intended use impart patentably distinguishing structure to the single flanged member, then he is reminded that he has the burden of proof to show that such is not inherently present in similar prior art flanged members (i.e., similar as claimed).

With respect to claims 1 and 2, it should be noted that the claims are drawn only to one flanged member. Accordingly, as claimed, Buono discloses a flanged member (Fig. 1) configured to be included as a first flanged member (14) in a flanged joint in a pressure equipment device, the flanged joint comprising the first flanged member (14) and a corresponding second flanged member (12) with a second flanged end having a second end surface, said first flanged member (14) comprising a first flanged end with a first end surface (E) which capable of corresponding to the second end surface of the second flanged end of the second flanged member (12), the first end surface (E) comprising a first load transferring surface through which forces are transferred when assembled together with the corresponding second flanged member; in a radial direction; wherein load transferring surface has an outermost

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abutment point in a cross section of the first flanged member (14), the outermost abutment point configured to abut against the second end surface of the second flanged member (14) via the gasket (16) when assembled together with said corresponding second flange member (14), the outermost abutment point being the abutment point situated farthest in the radial direction from the central axis of the first flanged member, said load transferring surface has an innermost abutment point in a cross section of the first flanged member, the innermost abutment point configured to abut against the second end surface of the second flanged member when assembled together with said corresponding second flange member, the innermost abutment point being the abutment point situated nearest in the radial direction from the central axis of the first flanged member; and a boring passing through the first end surface at a radial distance from a central axis of the first flanged member greater than the radial distance from the central axis of the first flanged member to the innermost abutment point, and less than the radial distance from the central axis of the first flanged member to the outermost abutment point. Buono fails to disclose that at least a portion of the first load transferring surface in an unstressed condition being concave such that the concave of the first end surface is curved; and wherein the first load transferring surface is concave over the entire extension thereof in the radial direction. It would have been obvious to one of ordinary skill in the art at the time of invention was made to form the concave of the first end surface as a curve instead of forming it from multi-straight lines, since there is no known criticality associated with the concave being curved and it is well-established that changes in shape are obvious expedients. The change in shape of the concave produces no new and unexpected results.



With respect to claim 5, Buono discloses (Figs. 1-3) wherein the first load transferring surface (30) comprises a varyingly concave surface in the radial direction; and wherein the part surface has different radii of curvature.

With respect to claim 6, Buono discloses (Figs. 1-3) that the first flange member (14) further comprising an internal axial through opening, the first load transferring surface (30) having innermost abutment point which capable of abutting against the corresponding second end surface of the second flanged member (12); and wherein the abutment point being situated nearest in the radial direction, to the opening. Buono fails to disclose that the concavity of the first load transferring surface extending all the way in to the abutment point. It is notoriously old, well-known and conventional that all materials deform when undergo some external force. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to provide the flange member of Buono with the concavity of the first load transferring surface extending all the way in to the abutment point in order to close the gap between the flange member and other member.

With respect to claim 7, Buono discloses (Figs. 1-3) wherein the first load transferring surface (30) has the innermost abutment point against the corresponding end surface (16) of the second flanged member (12), which has an internal through axial opening (A), the innermost abutment point being situated farthest in the radial direction, at the opening (A), the concavity of the first end surface (30) extending all the way in to the abutment point.

With respect to claim 8, Buono discloses the claimed invention except for the conceived straight X that connects the proximal point of the first load transferring surface in the radial direction, with distal point thereof, in the radial direction, has a length L_x and the concavity of the first load transferring surface has a maximum depth D_k in relation to a conceived plane surface produced by said line, which depth D_k is of the order of 0.01%-2% of L_x . It would have been an obvious matter of design choice to construct the concavity of end surface with Appellant's specific dimension since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955).

With respect to claim 10, Buono discloses (Fig. 1) that at least a part of a transition area (T) (see attachment), between the surface of the flange directed away from the end surface (30) and a part of the first flanged member that is substantially parallel to a longitudinal axis of the member, is shaped as a substantially elliptical area.

With respect to claim 14, 15, 17, and 18, Buono discloses (Fig. 1) that the concave surface has more than one radii of curvature; wherein the first load transferring surface is configured to contact directly the second end surface; and wherein at least the portion of the first load transferring surface in the unstressed condition that is concave comprises a majority of the first load transferring surface; and wherein the second flanged member (12) is identical with the first flanged member.(14).

(10) Withdrawn Rejections

The following grounds of rejection are not presented for review on appeal because they have been withdrawn by the Examiner. The rejection of claims 1, 2, 5-8, and 10-18 under the second paragraph of 35 USC § 112 has been withdrawn.

(11) Response to Argument

Appellant's arguments have been fully considered but they are not persuasive.

At the outset, it should be noted that Appellant has argued claims 11, 12 and 16 along with the independent claim 1. That is to say, there has been no separate argument presented for the patentability of claims 11, 12 and 16. Therefore, these claims stand or fall with the patentability determination of claim 1.

With respect to 35 USC § 112, second paragraph, rejection, Appellant alleges that claim 1 is directed to a first flanged member and not to a flanged joint as whole. Further, Appellant alleges that each portion of claim 1 that refers to the second flanged member describes a property of a structure of the first flanged member and thus a structure is imposed on the first flanged member. This is persuasive to the extent that these recitations are understood as being nothing more than functional recitations that set forth the intended environment of use. Moreover, features may be recited structurally or functionally though it has been clearly established that claims directed to an apparatus must be distinguished from the prior art in terms of structure, not function. Since it is evident that the claims are drawn to the subcombination, the 35 USC § 112, second paragraph, rejection has been withdrawn.

With respect to the art rejection of claim 1, Appellant argues that Watkins et al. (US 4,183,562) do not disclose or suggest that at least a portion of the first load transferring surface in an unstressed condition is concave in a radial direction, such that the at least the portion of the first load transferring surface is curved and defined by a concave curve function, and that the first load transferring surface is concave in the radial direction over at least an area that is subjected to deformation when the first flanged member is assembled together with the second flanged member, as required by claims 1 and 11. It is further argued that the first end surface E

and the second end surface E' identified by the Examiner are illustrated in Fig. 6 of Watkins as straight lines, not as concave. Finally, it is argued that the curved surfaces of Watkins face away from each other and have no abutment points configured to abut against a second end surface, as further required by claim 1. This is not persuasive.

Claim 1 merely recites that the load transferring surface includes at least a portion that is concave in the unstressed condition. As currently presented this language “reads on” the concavity found in Watkins et al radially inwardly of the identified abutment point A. Appellant appears to be relying on the specification to impart to the claims limitations otherwise not recited therein. This reliance is insufficient.

With respect to Appellant’s remarks concerning the first load transferring surface, it should be noted that the entire end surface constitutes this “surface”. Nothing in the language of the claim precludes this interpretation or otherwise requires the unstressed concave portion to have to contact any other surface. Thus, in accordance with the language of the claim, there is a first load transferring surface (the entire end surface) and at least a portion of this surface (the radially innermost portion) is concave in the radial direction in an unstressed condition. Further, the entire load transferring surface is subject to deformation (doesn’t say how much loading before deformation would occur nor does it specify what imparts/causes the deformation). Further still, it is readily ascertainable that the proximal point (i.e., the radially innermost point of the concavity) and the distal point “meet a plane inclined in the radial direction” (i.e., draw an imaginary line between the two points). There is also an outermost abutment point that will abut a second flanged member and it is located farthest in the radial direction from the central axis and an innermost abutment point (nothing in the claim requires the innermost abutment point to coincide with the proximal point) that is nearest to the central axis in the radial direction. Finally, there is a boring that is located between the innermost and outermost abutment points. While this interpretation may not be what is desired nor contemplated by Appellant, it remains that the language of the claim as instantly presented “reads on” the prior art and that is all that is necessary for anticipation to exist. If this is not what is desired, then it is suggested that the claim language be appropriately amended to preclude such interpretation and more accurately define what was actually intended.

Further with respect to claim 1, it should be noted that recitations with respect to the manner in which a claimed apparatus is intended to be employed do not differentiate the claimed apparatus from a prior art apparatus if the prior art apparatus otherwise teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987). Furthermore, while the features of an apparatus may be recited either structurally or functionally, claims are directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997). Thus, how the single flanged member of claim 1 is intended to be used is of little consequence to the patentability determination of such single flanged member. In other words, any flanged member that “reads on” the structure defined by claim 1 is properly said to anticipate claim 1.

Appellant argues, with respect to the Section 103 rejection, that Buono does not disclose or suggest an end face having at least a portion which is inclined in the radial direction and is concave. This is not persuasive. Buono clearly discloses (Fig. 2) an enlargement of the flange (14) that includes a surface (30) having a concavity and wherein the proximal and distal points define a plane that is inclined in the radial direction. In particular, Fig. 2 clearly illustrates distal point 38 being longitudinally offset from proximal point 36 by a distance “a”. Thus, any imaginary straight line drawn from point 36 to point 38 will necessarily be inclined. Accordingly, contrary to the allegation made by Appellant, Buono does, in fact, disclose and meet the recitation of the load transferring surface meeting “a plane inclined in the radial direction” as set forth by claim 1, lines 17-18.

With respect to the concavity being curved, it is noted that Appellant’s specification concludes with the expressed position that such shape is not critical and that many other variations of the shape of the concavity may be provided. It is also noted that Appellant discloses an embodiment wherein the concavity does not have a curvature, i.e., Fig. 1. Further, it appears that the only disclosed criticality pertains to the provision of a concavity, not the shape of the concavity. Accordingly, the Examiner’s position, as advanced above, is still deemed to be appropriate.

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(12) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

Examiners are required to give claim language its broadest reasonable interpretation.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Nahid Amiri /na/
Patent Examiner

December 9, 2010

/Daniel P. Stodola/
Supervisory Patent Examiner, Art Unit 3679

Conferees
Daniel P. Stodola /dps/
Marc Jimenez /MJ/